Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-14 (canceled).

15. (new)   A data traffic separation method for use in a packet-oriented mobile radio network, comprising:

separating data traffic arising in an access node of the mobile radio network, the data traffic including a plurality of layer 2 connections comprising a plurality of data flows in each case, with respect to connection-specific and/or data flow-specific handling, and is optionally routed proportionately via a processing unit performing such handling, wherein

a control function within the access node decides, based on the application-specific information and/or the local information of an information unit integrated in an access node whether a layer 2 connection is to be routed via the processing unit where, based on the application-specific information and/or the local information, connection-specific and/or data flow-specific handling is carried out in each case.

16. (new)   The method in accordance with claim 15, wherein when a communication to an application is set up by a subscriber, the application of a policy decision function transmits the application-specific information and the policy decision function via an interface authorizes the access node of the mobile radio network to set up one layer 2 connection or a plurality of layer 2 connections comprising a plurality of data flows in each case for the requested application and transmits the application-specific information.

17. (new)   The method in accordance with claim 16, wherein the application-specific information is routed via an authentication, authorization and accounting server via a remote access dial-in user-server to the access node.

18. (new)   The method in accordance with claim 17, wherein the application-specific information with respect to connection-specific handling of the layer 2 connection is routed to the access node and the application-specific information with respect to data flow-specific handling of data flows within the layer 2 connection directly to the processing unit.

19. (new)   The method in accordance with claim 17, wherein the application-specific information with respect to data flow-specific handling of data flows within a layer 2 connection is routed indirectly via the access node to the processing unit.

20. (new)   Method in accordance with claim 16, wherein the processing unit is integrated into the access node of the mobile radio network.

21. (new)   The method in accordance with claim 16, wherein a GPRS network is used as the mobile radio network.

22. (new)   The method in accordance with claim 16, wherein the billing information is transmitted as the application-specific information.

23. (new)   The method in accordance with claim 16, wherein Quality of Service information is transmitted as the application-specific information.

24. (new)   The method in accordance with claim 16, wherein the processing unit, in the case of a layer 2 connection routed thereto, carries out a data flow-specific separation or filtering and handling.

25. (new)   A mobile radio network, comprising:
        an access node with a control function for separating data traffic arising in an access node including a plurality of layer 2 connections comprising a plurality of data flows in each case in accordance with the predetermined information; and

a processing unit for handling data flows separated by the control function and layer 2 connections comprising a plurality of data flows in each case forwarded to the processing unit, wherein a control function within the access node decides, based on the application-specific information and/or the local information of an information unit integrated in an access node whether a layer 2 connection is to be routed via the processing unit where, based on the application-specific information and/or the local information, connection-specific and/or data flow-specific handling is carried out in each case.

26. (new)   The mobile radio network in accordance with claim 25, wherein the mobile radio network has a policy decision function for receiving, evaluating and the immediate forwarding of the application-specific information to the control function of the access node.

27. (new)   The mobile radio network in accordance with claim 25, wherein the processing unit comprises a filter function, which in incoming layer 2 connections, can separate data flows in accordance with the data flow-specific information so that these data flows can be subject to data flow-specific handling in the processing unit.